

Digital Acquisition and Wavelength Control of Seed Laser for Space-Based LIDAR Applications, Phase II

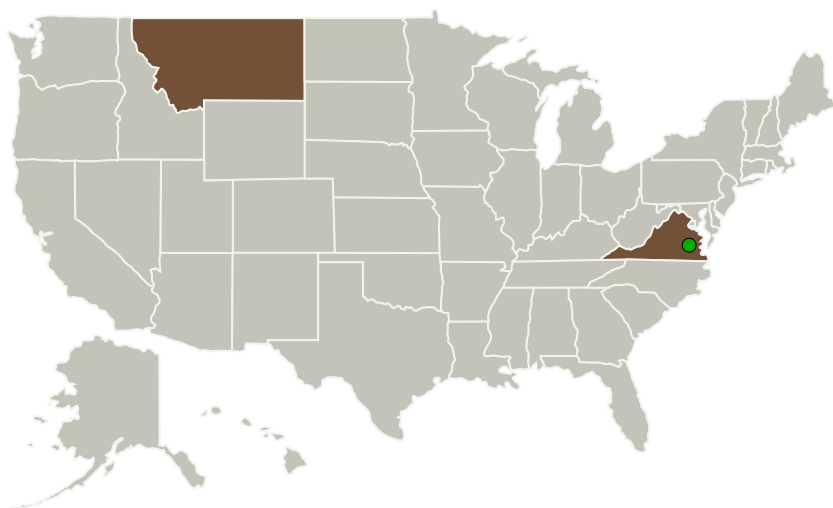
Completed Technology Project (2015 - 2017)



Project Introduction

This SBIR Phase II proposes the development and delivery of a compact, space qualifiable, diode-based seed laser system that utilizes a digital controller to allow autonomous acquisition of lock to the required wavelength in remote environments for multi-wavelength flight and space-based lidar applications. Successful development of this technology, due to its compact, efficient, and reliable design, is an important step towards enabling deployment of future space-based high spectral resolution lidar (HSRL) systems for remote sensing systems, as well as improving the autonomous performance of deployed and developing ground and flight-based HSRL systems.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
ADVR, Inc.	Lead Organization	Industry	Bozeman, Montana
● Langley Research Center(LaRC)	Supporting Organization	NASA Center	Hampton, Virginia



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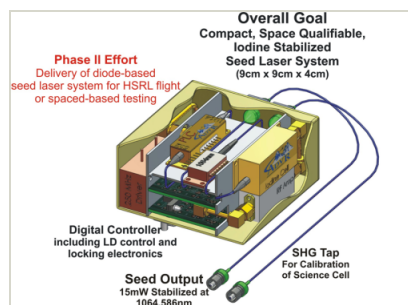


Primary U.S. Work Locations

Montana

Virginia

Images



Briefing Chart

Digital Acquisition and Wavelength Control of Seed Laser for Space-Based LIDAR Applications Briefing Chart

(<https://techport.nasa.gov/image/135941>)

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

ADVR, Inc.

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

Shirley Mcneil

Co-Investigator:

Shirley Mcneil

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Technology Maturity (TRL)

Start: **4**
Current: **5**
Estimated End: **5**



Technology Areas

Primary:

- TX08 Sensors and Instruments
 - └ TX08.1 Remote Sensing Instruments/Sensors
 - └ TX08.1.5 Lasers

Target Destinations

The Moon, Mars, Outside the Solar System, The Sun, Earth, Others Inside the Solar System